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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,040	12/04/2003	Gerard Klees	706499US2	8362

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EXAMINER

GOODEN JR, BARRY J

ART UNIT PAPER NUMBER

3616

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/728,040	KLEES, GERARD	
	Examiner	Art Unit	
	Barry J. Gooden Jr.	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1-3,6-9,11 and 14-18 is/are rejected.
- 7) ☒ Claim(s) 4,5,10,12 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the amendment filed 5/16/2006. Currently, claims 1-20 are pending. Claims 11 and 16 are amended. Claims 1-10, 12-15, 17, and 18 are original. Claims 19 and 20 are new.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 6-9, 11, 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLeod, US Patent 5,794,966, in view of Eckert, US Patent 4,655,440 and Franzini, US Patent 6,220,613 B1.

3. In regards to claims 1-3, 6-9, 11, 14-18, MacLeod shows all of the claimed elements including a hydro-pneumatic suspension system (See Figures 3, 6a and 6b; Column9, line 52 to column 10, line 15) having a right side hydro-pneumatic strut (10b) cross-coupled to a left side hydro-pneumatic strut (10a) such that an upper chamber of the right side strut (10b) is fluidly connected to a lower chamber of the left side strut (10a) and an upper chamber of the left side strut (10a) is fluidly connected to a lower chamber of the right side strut (10b), the suspension system further comprising:

a first accumulator (40) fluidly connected with the upper chamber of the right side strut (10b);

further comprising a third accumulator (40) fluidly connected with the upper chamber of the left side strut (10a);

further comprising a cross-flow valve (column 3, lines 45-57) for selectively fluidly disconnecting the right side strut (10b) from the left side strut (10a);

further comprising a conduit (24) and an articulation valve (column 3, lines 45-57) for selectively fluidly connecting the upper chamber of the right side strut (10b) with the lower chamber of the right side

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strut (10b), and selectively fluidly connecting the upper chamber of the left side strut (10a) with the lower chamber of the left side strut (10a); and

wherein the cross-flow valve (column 3, lines 45-57) selectively fluidly connects the upper chamber of the right side strut (10b) with the lower chamber of the left side strut (10a) and selectively fluidly connecting the upper chamber of the left side strut (10a) with the lower chamber of the right side strut (10b).

MacLeod shows all of the claimed elements, including an independent suspension mode and a roll-controlling configuration, yet excluding a second accumulator selectively fluidly connected by a spring-rate valve, a hydraulic supply selectively fluidly connected by a ride-height valve, and a control system adapted to control the valves to set the suspension in one of a multiple of configurations.

4. Eckert teaches providing an additional accumulator (15') selectively fluidly connected with the upper chamber (5) of the strut (3) by a spring-rate valve (17);

a hydraulic supply (16) fluidly connected with the strut (3);

a suspension control system (12) adapted to control the spring-rate valve, hydraulic pump and to set the suspension system in one of a multiple of configurations;

further comprising a flow-restricting orifice (20,21) fluidly connecting the first (15) and second accumulators (15') with the strut (3);

a suspension control system (12) adapted to control the spring-rate valve (17) and hydraulic pump (16) to set the suspension system in one of a multiple of configurations;

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hydropneumatic suspension system of MacLeod in view of the teachings of Eckert to include a second accumulator selectively fluidly connected by a spring-rate valve and a control system adapted to control the valves so as to provide increased functionality in the form of variable spring rate, variable damping rate, and a control system to modulate these different factors to set the suspension system in one of a multiple of configurations.

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5. Franzini teaches providing a hydraulic supply (600) selectively fluidly connected, by ride-height valves (612, 614, 616, 618), to the struts (13, 14, 17, 18).

a suspension control system adapted to control ride-height valves (612, 614, 616, 618) and the hydraulic pump (600);

wherein the suspension control system fluidly connects the hydraulic supply (600) to adjust the center of gravity, by raising the height of the vehicle;

wherein the suspension control system fluidly connects the hydraulic supply (600) to the struts (13, 14, 17, 18) to raise the overall height of the vehicle, and closes the ride-height valves (612, 614, 616, 618) upon reaching a selected vehicle height;

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the suspension system of MacLeod in view of the teachings of Franzini to include a hydraulic supply selectively fluidly connected by ride-height valves so as to provide height/trim adjustment functionality.

Allowable Subject Matter

6. Claims 19 and 20 are allowed.

7. Claims 4, 5, 10, 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 5/16/2006 have been fully considered but they are not persuasive. The system of MacLeod in view of Eckert and Franzini, US Patent 6,220,613 B1 teaches all of the elements as claimed and as cited in the previous office action. Further, examiner used the teachings of Eckert not Franzini, as a teaching of setting a suspension in one of a multiple configurations, which encompasses on-road and off-road configurations.

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Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry J. Gooden Jr. whose telephone number is (571) 272-5135. The examiner can normally be reached on Monday-Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJG


7/14/06
PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
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Barry J Gooden Jr.
Examiner
Art Unit 3616